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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,597	03/12/2001	Maria Cristina B. Estacio	18865005800	9290

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EXAMINER

LEWIS, MONICA

ART UNIT PAPER NUMBER

2822

DATE MAILED: 02/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/805,597

Applicant(s)

ESTACIO, MARIA CRISTINA B

Examiner

Monica Lewis

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to the amendment filed November 13, 2002.

Response to Arguments

2. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the lead rail must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: a) 11 (See Figure 3). A proposed drawing correction, corrected drawings or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: a) 21 (See Page 2 Line 18). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Art Unit: 2822

6. New formal drawings for Figures 1-3 are required in this application because the quality of the drawings does not permit one to accurately visualize the components of the package. The drawings are too dark to see specifically where Applicant's reference signs are pointing.

Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. The drawings are too dark to see specifically where Applicant's reference signs are pointing.

Finally, for examples of proper drawings, in addition to selected rules of practice related to patent drawings and interpretations of those rules, see the "Guide for the Preparation of Patent Drawings" which is available from the Superintendent of Documents (see MPEP Introduction).

Specification

7. The title of the invention is not **descriptive**. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2822

9. Claim 1 is rejected under 35 U.S.C. 103(a) as obvious over Yea et al. (U.S. Patent No. 6,373,078) in view of Huang et al. (U.S. Patent No. 6,344,687) and Lam et al. (U.S. Publication No. 2002/0071253).

In regards to claim 1, Yea et al. ("Yea") discloses the following:

a) a leadframe including a plurality of leads extending therefrom, a first source attach area on a first surface of the leadframe and a first gate attach area, and a second source attach area on a second surface of the leadframe and a second gate attach areas (See Figure 1, Figure 2, Figure 3, Column 4 Lines 65-67 and Column 5 Lines 1 and 2); and

b) a drain connection assembly coupled to a drain region (See Column 4 Lines 65-67 and Column 5 Lines 1 and 2).

In regards to claim 1, Yea fails to disclose the following:

a) at least two dies, a first which is coupled to the first source and gate attach areas and a second which is coupled to the second source and gate attach areas.

However, Huang et al. ("Huang") discloses a semiconductor device that has two dies (See Figure 1 and Figure 7). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor of Yea to include at least two dies as disclosed in Huang because it aids in providing a more compact package (See Column 1 Lines 50-56).

Additionally, since Yea and Huang are both from the same field of endeavor, the purpose disclosed by Huang would have been recognized in the pertinent art of Yea.

b) a body coupled to the semiconductor device such that a drain region is exposed.

However, Lam et al. ("Lam") discloses a semiconductor device that has a body (See Figure 1G, 6F and 8F). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor of Yea to include a body as disclosed

Art Unit: 2822

in Lam because it aids in protecting the device from external particles (See Figure 1G, 6F and 8F).

Additionally, since Yea and Lam are both from the same field of endeavor, the purpose disclosed by Lam would have been recognized in the pertinent art of Yea.

10. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as obvious over Yea et al. (U.S. Patent No. 6,373,078) in view of Huang et al. (U.S. Patent No. 6,344,687), Lam et al. (U.S. Publication No. 2002/0071253) and Kinsman (U.S. Patent No. 5,789,803).

In regards to claim 2, Yea fails to disclose the following:

a) at least one of the dies is a bumped die.

However, Kinsman discloses a semiconductor device that has a bumped die (See Column 2 Lines 10-13). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor of Yea to include bumped die as disclosed in Kinsman because it aids in providing an electrical connection (See Column 2 Lines 10-13).

Additionally, since Yea and Kinsman are both from the same field of endeavor, the purpose disclosed by Kinsman would have been recognized in the pertinent art of Yea.

In regards to claim 3, Yea fails to disclose the following:

a) dies are bumped dies.

However, Kinsman discloses a semiconductor device that has a bumped die (See Column 2 Lines 10-13). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor of Yea to include bumped die as

Art Unit: 2822

disclosed in Kinsman because it aids in providing an electrical connection (See Column 2 Lines 10-13).

Additionally, since Yea and Kinsman are both from the same field of endeavor, the purpose disclosed by Kinsman would have been recognized in the pertinent art of Yea.

11. Claim 4 is rejected under 35 U.S.C. 103(a) as obvious over Yea et al. (U.S. Patent No. 6,373,078) in view of Huang et al. (U.S. Patent No. 6,344,687), Lam et al. (U.S. Publication No. 2002/0071253) and Standing et al. (U.S. Publication No. 2001/0048116).

In regards to claim 4, Yea discloses the following:

a) the drain connection assembly comprises a lead rail (9 and 10) (See Figure 3).

In regards to claim 4, Yea fails to disclose the following:

a) a drain clip.

However, Standing et al. ("Standing") discloses a semiconductor device that has a drain clip (See Page 1 Paragraph 9 and Page 3 Paragraph 48). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor of Yea to include a drain clip as disclosed in Standing because it aids in providing coupling to the drain (See Page 1 Paragraph 9 and Page 3 Paragraph 48).

Additionally, since Yea and Standing are both from the same field of endeavor, the purpose disclosed by Standing would have been recognized in the pertinent art of Yea.

Art Unit: 2822

Conclusion

12. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure: a) Adams (U.S. Patent No. 4,514,750) discloses an integrated circuit package; b) Letterman, Jr. et al. (U.S. Patent No. 6,081,031) discloses a semiconductor package consisting of multiple conductive layers; c) Huang (U.S. Patent No. 6,215,176) discloses a dual leadframe package; d) Hung (U.S. Patent No. 6,476,474) discloses a dual die package; and e) Inoue (U.S. Patent No. 5,512,781) discloses a semiconductor package.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica Lewis whose telephone number is 703-305-3743.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on 703-308-4905. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722 for regular and after final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

ML

January 23, 2003


AMIR ZARABIAN
SUPERVISORY PATENT EXAMINER
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